

Referring now to Fig. 6, the planning system 102 is shown in more detail. The planning system 102 manages the long term planning for program management of budgets, funding, and schedules. This long term planning information is the core information used in municipalities and agencies Capital Improvement Plans (CIPs). The planning system 102 includes a module for handling capital improvement plan 232 that can be used to provide decision support for municipalities. For example, a owner or agency can have a five-year capital improvement plan. The owner or agency can categorize different elements in that plan. For example, one may be involved with the parks and recreation program, one may be involved with the fire program, and one may be involved with the street and bridge program.

The capital improvement plan module 232 communicates with a plurality of program modules 234, 238, and 242. Further, the program module 234 stores information 236 associated with the first project. Similarly, the program module 238 stores information 240 associated with the second project, and module 242 stores information 244 associated with the Nth project. This structure allows for summary roll-up reports at the project, program, and CIP level.

The planning system 102 includes a Fund/Source Module that maintains multi-year budget plans for the overall CIP process. This allows program managers to create a multi-year Capital Improvement Plans and track the funding sources by program, fund, and by source. Each CIP plan is controlled separately to maintain a historical record of the previous year's CIP plan. This Planning System controls and manages the data associated with this process.

The Design System manages the document control process for design process. This system contains various modules that provide the PCS functions from Design Contract Award to Construction Contract Award. The following are the modules and the sections below

will describe how each Design System module controls the design information by performing documentation control of design information for each individual their projects:

- Design Contract Award Phase Module
- Design Phase I Module
- Design Phase II Module
- Design Review Module
- Post Advertisement to Bid Phase Module
- Post Bid to Construction Contract Award Module

Phase I spans the time where a user has awarded a contract to a particular design or architectural firm to preliminarily design the project. Phase II spans the time required to perform a complete design where construction details are defined. For instance, if the user is building a building, the Phase I design includes performing a site layout. Phase II Design would be what the user wants an atrium area to look like inside, for example. Phase II would also then specify all the structural details, for example the cabinets and the doors, and the result of Phase II a very detailed design specification.

The software is customizable to the individual user by developing templates that resemble a client's existing forms. These modules are all follow the software design architecture and allow the user to select a forms from a dialog box list. This launches the appropriate input window to appear so the user can view and update the design information as required.

Referring now to Fig. 7a, 7b and 7c, operations associated with the design module 104 is shown. In Fig. 7a, a meeting is initiated (step 250). Next, interim progress reviews are periodically performed, for example, every two to three weeks (step 250). Next, conflicts

between the private utility and various governmental agencies are coordinated (step 254). In step 256, various investigations are performed. The investigations include geotechnical investigations, environmental assessments, survey activities and archeological investigations. Next, the process of Fig. 7a analyzes the real estate activities associated with the design.

5 These activities include railroad right of way and private pipeline permits (step 256). Next, a preliminary engineering report is drafted (step 260). A schematic design is submitted (step 262). A pretechnical review is performed (step 264-266). The decisions and action items of the technical review are captured (step 268), and a preliminary engineering report is finalized (step 270).

10 From step 270, a schematic design is generated and submitted for the architectural project (step 278). Next, another pretechnical review meeting is held (step 280-282). The records of the decisions and action items associated with a technical review committee meeting are stored (step 284). A preliminary engineering report is then generated (step 286). The design development submittal is then sent (step 288). The scope of the final design is refined (step 290). Finally, the project receives a notice to proceed (step 292) before the phase one of the design is deemed to be completed (step 294).

15 Phase I Design Module manages the documentation associated with the following fifteen (15) phases of this process. The flowchart on the following page illustrates the Phase I Design process.

1. Kick-Off Meeting
  - a. Estimate for Payment
  - b. Design Consultant Memorandum - Action Item Completion
2. Interim Progress Review Meetings